Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for the *in vitro* antigen specific activation of antibody producing cells, said method comprising the steps of:

(i) culturing a population of isolated, non-adherent mononuclear immune cells, which population comprises T helper cells or functional equivalent thereof, said antibody producing cells and a functionally insignificant number of lysosome-containing cells, for a time and under conditions sufficient to induce differentiation of said antibody producing cell;

(ii) culturing a population of adherent mononuclear immune cells for a time and under conditions sufficient to facilitate antigen presenting cell differentiation;

(iii) sequentially pulsing the cell population of step (i) with:

- an effective number of cells derived from cell population of step (ii), wherein the presentation of said antigen by said antigen presenting cells is facilitated; and

- a functionally significant number of lysosome-containing cells

for a time and under conditions sufficient to facilitate antigen specific activation of said antibody producing cells.

2. (Original) The method according to claim 1 wherein said antibody producing cell is a B cell.

3. (Original) The method according to claim 2 wherein said B cells are human B cells.

4. (Currently Amended) The method according to ~~any one of claims 1 or 2 or 3~~claim 1 wherein said antigen presenting cell is a dendritic cell.

5. (Currently Amended) The method according to claim 2~~, 3 or 4~~ wherein said activated B cells undergo differentiation to pre-plasma cells.

6. (Original) The method according to claim 5 wherein said pre-plasma cell is a $CD19^{+}/CD38^{+}$ cell.

7. (Currently Amended) The method according to ~~any one of claims 1 to 6~~claim1 wherein said mononuclear immune cells are isolated from a lymphoid organ or tissue.

8. (Original) The method according to claim 7 wherein said lymphoid organ or tissue is blood, spleen, thymus, tonsil, lymph node or bone marrow.

9. (Original) The method according to claim 8 wherein said lymphoid tissue is blood.

10. (Original) The method according to claim 9 wherein said blood is peripheral blood.

11. (Currently Amended) The method according to ~~any one of claims 2 to 10~~claim 2 wherein said T helper cell is a Th2 cell.

12. (Currently Amended) The method according to ~~any one of claims 1 to 11~~claim 1 wherein said functionally significant number of lysosome-comprising cells is up to 15% lysosome containing cells.

13. (Original) The method according to claim 12 wherein said functionally significant number of lysosome-containing cells is up to 10% lysosome containing cells.

14. (Currently Amended) The method according to ~~any one of claims 2-13~~claim 2 wherein:

(a) the mononuclear immune cells, B cells and functionally insignificant number of lysosome containing cells of step (i) are cultured together with an effective amount of one or more growth factors and anti-CD40 ligand; and

(b) said adherent mononuclear immune cells of step (ii) are cultured together with one or more growth factors.

15. (Original) The method according to claim 14 wherein the growth factors of step (i) are IL-4 and GM-CSF.

16. (Original) The method according to claim 15 wherein the growth factors of step (ii) are IL-4, GM-CSF and/or TNF-α.

17. (Currently Amended) The method according to ~~any one of claims 2 to 16~~claim 2 wherein said antigen is a peptide comprising at least one epitope.

18. (Original) The method according to claim 17 wherein said epitope is an epitope of a Hepatitis B or Hepatitis C virus surface molecule.

19. (Original) The method according to claim 18 wherein said Hepatitis B epitope is the 30 amino acid residue peptide coded for by the Pre-S2 region of HBV DNA.

20. (Original) The method according to claim 19 wherein said epitope substantially corresponds to the sequence:

PQAMQWNSTTFHQTLQDPRVRGLYFPAGGK (SEQ ID NO:1)

21. (Original) The method according to claim 17 wherein said peptide comprises an epitope of the tetanus toxoid precursor.

22. (Original) The method according to claim 21 wherein said epitope comprises the tetanus toxoid region defined by residues 829-843.

23. (Original) The method according to claim 22 wherein said epitope substantially corresponds to the sequence:

QYIKANSKFIGITEL (SEQ ID NO:2)

24. (Original) The method according to claim 17 wherein said peptide comprises an epitope of Melan A.

25. (Original) The method according to claim 24 wherein said epitope comprises the Melan A region defined by residues 27-35.

26. (Original) The method according to claim 25 wherein said epitope substantially corresponds to the sequence:

AAGIGILTV (SEQ ID NO:3)

27. (Original) The method according to claim 17 wherein said peptide comprises an epitope of HIV1 gp120.

28. (Original) The method according to claim 27 wherein said epitope comprises the HIV1 gp120 region defined by residues 304-318

29. (Original) The method according to claim 28 wherein said epitope substantially corresponds to the sequence:

RKSIRIQRGPGRAFV (SEQ ID NO:4)

30. (Original) The method according to claim 27 wherein said epitope comprises the HIV1 gp120 region defined by residues 294-473.

31. (Original) The method according to claim 17 wherein said peptide comprises an epitope of HER2.

32. (Original) The method according to claim 31 wherein said epitope comprises the HER2 region defined by residues 369-379.

33. (Original) The method according to claim 32 wherein said epitope substantially corresponds to the sequence:

KIFGSLAFL (SEQ ID NO:5)

34. (Currently Amended) ~~The cell~~Cell cultures produced in accordance with the method of ~~any one of claims 1 to 33~~claim 1.

35. (Currently Amended) The antibody producing cells generated in accordance with the method of ~~any one of claims 1 to 33~~claim 1.

36. (Original) The cells according to claim 35 wherein said cells are clonal.

37. (Currently Amended) The cells according to claim 35 ~~or 36~~ wherein said cells are immortal.

38. (Currently Amended) The antibody produced by the cells of ~~any one of claims 35 to 37~~claim 35 or derivative, homologue, analogue or mimetic of said antibody.

39. (Original) A pharmaceutical composition comprising the antibody of claim 38 together with one or more pharmaceutically acceptable carriers and/or diluents.

40. (Currently Amended) A method of therapeutically and/or prophylactically treating a subject, said method comprising administering to said subject an effective amount of antibody according to claim 38 ~~or 39~~ or derivative, homologue, analogue, chemical equivalent or mimetic of said antibody.

41. (Currently Amended) A method of detecting an antigen, said method comprising contacting a putative antigen with an antibody directed to an epitope of said antigen, which antibody has been generated in accordance with the method of ~~any one of claims 1 to 33~~claim 1 and screening for the formation of an antigen-antibody complex.